

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1 - 42. (Cancelled)

43. (Currently Amended) A method comprising:

receiving, at an input diplexer in a local service module located in a neighborhood, a multiplexed channel signal that includes an internet connectivity channel and at least one digital video channel and at least one analog video channel;

separating by a divider module coupled to the input diplexer and included in the local service module, the internet connectivity channel from the multiplexed channel signal to output an internet connectivity channel signal;

receiving by a request module, at the local service module, via a two-way communications path from at least one of a plurality of room interface units located within the neighborhood and serviced by the local service module, a request to transmit the at least one digital video channel or the at least one analog video channel;

in response to the request, ~~a programmable converter~~ a plurality of conversion modules coupled to the divider module and the request module in the local service module converting the at least one digital video channel or the at least one analog video channel from its frequency within the multiplexed channel signal to a signal having a predetermined frequency that corresponds to the at least one of the plurality of room interface units making the request;

combining by a plurality of combiner modules correspondingly coupled to the conversion modules and the divider module in the local service module, the internet connectivity channel signal and the converted signal having the predetermined frequency;
and

transmitting by the local service module, the combined signal to the at least one of the plurality of room interface units.

44. (Previously Presented) The method of claim 43 further comprising: the local service module passing the at least one digital video channel through a band pass filter with a narrow frequency band.

45. (Previously Presented) The method of claim 44, wherein the narrow frequency band is centered at the output of a programmable converter within the local service module.

46. (Previously Presented) The method of claim 43, wherein the at least one digital video channel is received from a Personal Video Recorder.

47. (Previously Presented) The method of claim 43, wherein the at least one digital video channel is received from a Video On Demand Server.

48. (Previously Presented) The method of claim 43, wherein the at least one digital video channel is received from a Personal Computer.

49. (Previously Presented) The method of claim 43, wherein the internet connectivity channel signal includes a DOCSIS forward channel carried from an Internet service provider to a customer and the method further comprises:

the local service module converting the DOCSIS forward channel to a different frequency than the frequency of the DOCSIS forward channel within the multiplexed channel signal.

50. (Previously Presented) The method of claim 43 further comprising:

receiving, by the local service module, via the two-way communications path from the at least one of the plurality of room interface units, information for selecting a certain channel.

51. (Previously Presented) The method of claim 50, wherein the information received from the at least one of the plurality of room interface units further includes a DOCSIS return channel for transmission to an Internet service provider.

52. (Previously Presented) The method of claim 50, wherein the information for selecting a certain channel includes information identifying a frequency corresponding to the certain channel within the multiplexed channel signal.

53. (Previously Presented) The method of claim 52 further comprising:
the local service module tuning to the frequency corresponding to the certain channel within the multiplexed channel signal.

54. (Previously Presented) The method of claim 52 further comprising: the local service module converting the frequency corresponding to the certain channel within the multiplexed channel signal from a first frequency to a second frequency corresponding to the at least one of the plurality of room interface units.

55. (Previously Presented) The method of claim 43, wherein the at least one digital video channel includes MPEG-4 encoded information,

56. (Cancelled)

57. (Previously Presented) The method of claim 43, wherein the two-way communications path is a cable.

58. (Previously Presented) The method of claim 57, wherein the cable is a coaxial cable.

59. (Previously Presented) The method of claim 43, wherein the request to transmit the at least one digital video channel or at least one analog video channel takes the form of a signal received at the predetermined frequency.

60. (Previously Presented) The method of claim 43, wherein at least one digital video channel is converted from its frequency within the multiplexed channel signal to a predetermined frequency that corresponds to the at least one of the plurality of room interface units, the method further comprising:

assembling by the local service module, the at least one digital video channel into a single frequency-multiplexed transmission signal.

61-83. (Cancelled)

84. (Previously Presented) A system comprising:

an input diplexer adapted to receive a multiplexed channel signal that includes an internet connectivity channel and at least one digital video channel and at least one analog video channel;

a divider module coupled to the input diplexer to separate the internet connectivity channel from the multiplexed channel signal to output an internet connectivity channel signal and a plurality of signals having the at least one digital video channel and at least one analog video channel;

a request module adapted to receive, via a two-way communications path from at least one of a plurality of room interface units proximally located in a neighborhood where the system is located, a request to transmit the at least one digital video channel or at least one analog video channel;

a plurality of conversion modules coupled to the divider module and the request module, and adapted to convert, in response to the request, the plurality of signals having the at least one digital video channel or the at least one analog video channel from its frequency within the multiplexed channel signal to a predetermined frequency of a corresponding one of the at least one of the plurality of room interface units; and

a plurality of combiner modules correspondingly coupled to the conversion modules and the divider module, and adapted to combine the internet connectivity channel signal and one of the signals having the predetermined frequency, the combined signals to be transmitted from the combiner modules to respective ones of the at least one of the plurality of room interface units.

85. (Currently Amended) The system of claim 84 further comprising a plurality of band pass filters correspondingly coupled to the divider and the ~~converter~~ conversion modules, wherein each of the signals having the at least one digital video channel and the at least one analog video channel is passed through one of the plurality of band pass filters with a narrow frequency band.

86. (Currently Amended) The system of claim 85 wherein the narrow frequency band is centered at the output of a ~~converter~~ conversion module.

87. (Previously presented) The system of claim 84 wherein the at least one digital video channel is received from a Personal Video Recorder.

88. (Previously presented) The system of claim 84 wherein the at least one digital video channel is received from a Video On Demand Server.

89. (Previously presented) The system of claim 84 wherein the at least one digital video channel is received from a Personal Computer.

90. (Currently Amended) The system of claim 84 wherein the internet connectivity ~~channel~~ channel is adapted to include ~~[[s]]~~ a DOCSIS forward channel carried from an Internet service provider to a customer, and the system further comprises a DOCSIS channel filter coupled to the divider module, and adapted to convert the DOCSIS forward channel to a different frequency than the frequency of the DOCSIS forward channel within the multiplexed channel signal.

91. (Cancelled)

92. (Previously Presented) The system of claim 84 wherein the request received from the at least one of the plurality of room interface units further includes a DOCSIS return channel for transmission to an Internet service provider.

93. (Currently Amended) The system of claim ~~91-84~~ 84 wherein the request to transmit the at least one digital video channel or at least one analog video channel includes information identifying a frequency corresponding to the certain channel within the multiplexed channel signal.

94. (Cancelled)

95. (Cancelled)

96. (Previously presented) The system of claim 84 wherein the at least one digital video channel includes MPEG-4 encoded information.

97. (Previously presented) The system of claim 84 further comprising:

a plurality of transmission modules correspondingly coupled to the combiner modules, and adapted to transmit correspondingly, via a two-way communications path, the

at least one digital video channel or the at least one analog video channel at the predetermined frequency to the at least one of a plurality of room interface units; and

wherein the request to transmit the at least one digital video channel or at least one analog video channel is received via the two-way communications path.

98. (Previously presented) The system of claim 97 wherein the two-way communications path is a cable.

99. (Previously presented) The system of claim 98 wherein the cable is a coaxial cable.

100. (Previously presented) The system of claim 84 wherein the request to transmit the at least one digital video channel or at least one analog video channel takes the form of a signal received at the predetermined frequency.

101. (Cancelled)

102. (Previously presented) The system of claim 84 wherein the request module further comprises:

a processing module adapted to process the channel selection information to obtain the at least one digital video channel or at least one analog video channel from the multiplexed channel signal.

103-124. (Cancelled)

125. (Previously Presented) The method of claim 43 further comprising filtering the multiplexed channel signal with a bandpass filter to allow substantially only a DOCSIS forward channel signal for the corresponding room interface unit to pass through.

126. (Previously Presented) The method of claim 43 further comprising receiving a DOCSIS return channel signal and providing a frequency-selectable return signal back to a cable modem transmission system (CMTS).

127. (Previously Presented) The method of claim 126 wherein the frequency-selectable return signal has a range of 10-45 Megahertz (MHz).

128. (Currently Amended) A system comprising:

input means for receiving a multiplexed channel signal that includes an internet connectivity channel and at least one digital video channel and at least one analog video channel;

divider means for separating the internet connectivity channel from the multiplexed channel signal to output an internet connectivity channel signal and a plurality of signals having the at least one digital video channel and at least one analog video channel;

request means for receiving, via a two-way communications path from at least one of a plurality of room interface units proximally located in a neighborhood where the system is located, a request to transmit the at least one digital video channel or at least one analog video channel;

conversion means for converting, in response to the request, the plurality of signals having the at least one digital video channel or the at least one analog video channel from its frequency within the multiplexed channel signal to a predetermined frequency of a corresponding one of the at least one of the plurality of room interface units; and

combiner means for combining the internet connectivity channel signal and one of the signals having the predetermined frequency, the combined signals to be transmitted from the combiner modules of the combiner means to respective ones of the at least one of the plurality of room interface units.

129. (Previously Presented) The system of claim 128 further comprising band pass filter means, wherein each of the signals having the at least one digital video channel and the at least one analog video channel is passed through the band pass filter means with a narrow frequency band.

130. (Previously Presented) The system of claim 128 wherein the internet connectivity channel includes a DOCSIS forward channel carried from an Internet service provider to a customer, and the system further comprises DOCSIS channel filter means for converting the DOCSIS forward channel to a different frequency than the frequency of the DOCSIS forward channel within the multiplexed channel signal.